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Rev. 07/10/02

Woodward-Clyde Consultants

Engineering & sciences applied to the earth & its environment

April 22, 1994

Mr. Brad Bradley
USEPA Region V, 5HS-11
77 West Jackson, 6th Floor
Chicago, Illinois 60604

Subject: Notes from IDPH public meeting on blood lead levels in children, April 21, 1994.

Dear Mr. Bradley:

This letter transmits a summary of my notes from the IDPH public meeting held April 21, 1994. Also enclosed are a copy of the report presented at the meeting and two microcassette tapes of the meeting. The quality of the tapes may be poor, so I am enclosing a copy of my handwritten notes from the meeting for your use.

If you have any questions about any of the items, please feel free to call either David Pate or myself at (314) 429-0100.

Sincerely,

Eric S. Page
Staff Geologist

ESP:dbs

Enclosures

cc: David Pate
File

2318 Millpark Drive • Maryland Heights, Missouri 63043
314-429-0100 • Fax 314-429-0462

Woodward-Clyde Consultants

MEMORANDUM

To: Brad Bradley

From: Eric Page

Office: St. Louis

Date: April 22, 1994

Subject: Notes from IDPH public meeting on blood lead levels in children, April 21, 1994.

The IDPH public meeting was held in the township hall (2060 Delmar) on April 21, 1994 with approximately 22 persons attending. WCC was present to record the meeting at the request of USACE, USEPA. Dave Webb, a toxicologist for IDPH, started the meeting by describing a study that was done in the Granite City area on children 6 months to 6 years in age with regards to blood lead levels. He also presented a report that was prepared upon completion of the study. The report is currently in a public comment period and comments can be addressed to him at the address on the report from April 11 to May 25, 1994. He then introduced the primary investigator on the project-Dr. Renatta(sp) Kimbro of the Institute for Evaluating Health Risk. She began by showing an overhead illustrating a comparison of blood lead levels vs. action levels prescribed by the Center for Disease Control (1991). The action levels shown on the overhead were as follows:

Class	Lead Level (μg/dL)	Action
I	<9	No blood lead poisoning
IIA	10 - 14	Should trigger prevention activities
IIB	15 - 19	Needs nutritional intervention, may require environmental investigation if levels don't decrease.
III	20 - 44	Needs environmental investigation, remediation, medical evaluation.

The next overhead displayed the blood lead level distribution for the Granite City study. There were a total of 827 participants, with 490 between 6 mos. and 6 yrs of age. The mean blood lead level was 5.8 with a range of 0.2 - 40.2 μg/dL. The number of participants with a level of 10 or higher was 89. 16% of the study group fell in class IIA, IIB, or III, 9% in class IIA, 5.5% in class IIB, and 1% in class III and was shown in the 3rd overhead.

The next overhead showed a site plan of the Granite City, Madison, Venice area. Dr. Kimbro noted that there was no control site for the study. Dr. Kimbro felt that they were unable to find a correlation between proximity to the Taracorp site and blood lead level.

Her 5th overhead showed analytical results of the environmental samples that were taken from the homes of the participants. Samples of soil, dust, drinking water, indoor and outdoor paint were taken. Paint lead levels were very high: 10.4 mg/cm^2 was the maximum for indoor paint and 31.2 mg/cm^2 was the maximum for outdoor paint. Soil lead levels were much lower and tap water the lowest. Dust levels were fairly high also. (I assume this table is in the report). Therefore they said that dust was the most likely source of elevated blood lead levels. Soil only contributed approximately 3%. Dr. Kimbro pointed out other findings: Paint had more effect if house was in poor condition, blood lead levels higher in rented houses than in owned houses due to their being in generally poorer condition, and the children near smelter had higher lead levels but condition of houses were generally poorer there so it wasn't because of the smelter that they had high lead levels.

The 6th overhead was a comparison of lead levels after the tests were repeated 4 months and 1 year after the original testing. Between the two events parents were told to keep children's hands clean and taught ways to reduce the child's exposure to lead. The results of the second study showed lower lead levels. They sampled 78 of the 89 who had lead levels greater than 10 in the first study. The summary is that intervention or counseling and house cleaning can help to reduce childrens blood lead levels. Dr. Kimbro noted that the results also indicated that the children with the highest lead levels in the first study were able to have the largest decreases in lead levels in the second study.

The meeting was then opened to questions. Craig Tarpoff (I think) began by reading a passage from the ROD saying that the EPA says that paint based lead does not pose more of a problem if the paint is in poor condition. He asked if the study disagrees with this. Dr. Kimbro said that the study showed a correlation between poor paint quality and high lead levels. He also noted that the EPA found that a reduction from 1000 to 500 ppm in soil translated to a 3.9 μg/dL reduction in blood lead level. Dr. Kimbro said that the study

found no such correlation. Cathy Andria (Citizens Action Group) brought up the point that intervention had been
done by the EPA before the first tests. Someone in the audience said that the EPA flyer was not very effective. Dr. Kimbro cited an article in the New England Journal of Medicine in 1983 that showed similar results to their study. (She didn't have a title or exact date). She conceded that a combination of everything including soil in house dust affects lead levels. Soil itself makes only a small contribution. Dr. Kimbro was asked if she thought children could still get lead poisoning even if the EPA stops its cleanup. She doesn't think that children will still get lead poisoned. Dr. Kimbro doesn't see a justification for removing soil since paint is a larger contributor to dust than soil. She also noted a correlation between children of smokers and high lead levels. Also made the correlation that there is more smoking in lower socioeconomic groups and they rent houses (which are in poor repair) and therefore have higher lead levels. They also noted that the majority of the sample came from outside the EPA's study boundaries. (Said they couldn't find enough subjects). She also doesn't advocate removing lead paint even though Granite City is filing for a $6 million HUD grant for lead paint abatement. The assumption is that this grant would allow for the cleanup of 750 homes in Granite City. A question was asked as to whether the pile can be moved safely if dust is the major contributor to the problem. Dr. Kimbro wouldn't answer the question because she said she had only seen the pile once and wasn't prepared to comment on the issue. There was also some mention of a similar site in Baltimore in which after the soil in yards was replaced but the source was left alone the yards were recontaminated after about 2 years. Craig Tarpoff said "that pile must go", and felt that a similar situation could happen here.

cc: Dave Pate
Ken Hagg

DATE 4/21/94

PROJECT NO.

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IDPH Public Meeting

~22 Attendees

(618) 656 6680

[illegible]

Soil lead vs. lead in children 6 mos. to 6 yrs.

45 day public comment period 4/11-5/25

Renatta Kimbro - Institute for Evaluating Health

CDC - Oct. 1991

Slide 1

Class	Lead level ug/dL	Child's health
I	< 9	Not poisoned
IIA	10-14	Should trigger prevention activities
IIB	15-19	Need nutritional intervention, may lead to environmental investigation
III	20-44	Needs environmental investigation, remediation, medical evaluation.

Slide 2 Blood lead level distribution

827 participants mean 5.8 ug/dL

490 age 6mos-6yrs Range 0.2 - 40.2

No. with 10 or greater 89

Slide 3

16% of survey in Class IIA, IIB, or III

89% in class IIA

5.5% in class IIB

1% in Class III

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Fig 4 Site plan No control site for study!

No correlation between proximity to Tacoma & [illegible]

Fig 6 Lead in environmental samples
soil, dust, drinking water, indoor & outdoor paint

Said paint levels were very high
max. Indoor 10.4 mg/cm^2
max. outdoor 31.2 mg/cm^2

Dust was best association

Tap Water was poorest

Paint had more effect if house was in poor condition.

Blood lead levels higher in rented houses than in owned houses

Found that children near smelter had higher levels but condition of houses were generally poorer.

Lead in Soil made at most 3% contribution

Fig 7 Repeated 61 ~~of 78 childrens~~ tests after 4 mos. & 1 yr.

1st test mean level = 15
2nd test mean level = 7.7

Levels dropped after telling parents ways to keep childrens hands clean and how to reduce the childs exposure.

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Switched Tape Side.
Showed that children who had high levels showed greatest decrease in blood lead level.

Summary says counseling & house cleaning can help to reduce childrens blood lead levels.

Craig Tarpoff? Reading from ROD
EPA says paint based lead not more of a problem if paint is in poor ~~quality~~ condition. Study says otherwise.

EPA found that a reduction from 1000 to 500 ppm in soil translate to a 3.9 ug/dL reduction in blood lead level.
Study showed no such ~~erratta~~ correlation.

Kathy Andra thought intervention was done before tests

NEJM (1983) Article on blood lead level reductions

Combination of everything including soil in house dust affects levels. Soil itself makes only small contribution.

Doesn't think children will quit lead poisoning even if city forces EPA to stop.

Doesn't see justification for removing soil ⇒ Response to question of Craig Tarpoff

Paint is a larger contributor to dust than soil.

Children of smokers had higher levels also.

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More smoking in lower socioeconomic group ⇒ they rent ⇒ children have higher lead levels.

Majority of sample came from outside of NLTSS boundaries

[redacted] Doesn't necessarily advocate removing lead paint

Hoping for HUD grant to help remediate homes.
~$6 million ⇒ would clean 750 homes

Question about whether pile can be removed safely.